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NOTES ON THE PSYCHOLOGICAL OBSERVATION OF CHILDREN.

I.

PSYCHOLOGICAL observation of children departs in no abrupt or radical way from ordinary observation. Psychology, it is perhaps unnecessary to remark, promises no peculiar, far-fetched, clairvoyant insight into the workings of a child's mind. It does not open up avenues of easy, telepathic access to the mysteries of the spirit. Nor does psychology justify belief in the efficacy of any amount of hocus pocus with scientific or philosophical terminology, or in any amount of performing with brass instruments, or upon brass instruments, although it does have to have a language, and it does have to avail itself of certain forms of physical apparatus. Psychological observation aims to make ordinary observation more effective and fruitful by stopping to look for a larger and more definite range of facts than ordinary observation usually has time to try to discover, and by making more explicit certain underlying relations or principles to which ordinary observation does not always penetrate.

It seems altogether likely, therefore, that psychological observation of children may well form a part of a course in psychology for prospective teachers, even when the course is purely introductory and elementary. There is nothing particularly novel in this point of view, but how such observation can best be organized and carried on is not altogether clear. It is not possible to determine without considerable experimenting what kind of guidance is most helpful; what things should be looked for; and where and when. These notes are simply notes on some of the experimenting of this kind which has been done during the present quarter with a beginning class in psychology. It will be evident that no one line of inquiry has been followed exclusively or worked very far, but I believe that extracts from the written reports of students reporting on their

observations will be found suggestive of several lines that could be developed further with profit.

Observation of any kind is not likely to get very far or become at all scientific without a consciousness of some clue, or of some guiding principle of unity. In the absence of such a clue or principle, we either get completely lost in the complexity of what we are trying to observe, or else we go to the other extreme and say that we see nothing worth mentioning ; we thought there was something to see in this region, but we must have been fooled by a mirage. Thus students in the class in psychology who have difficulty in making reports on their observations of children seem to gravitate toward one extreme or the other. Some complain that the children are so changeable and contradictory that only confused impressions can be carried away. Others say that they saw nothing in the children worth mentioning, that it was a lesson in arithmetic or in writing, and that the method of teaching it was the only thing they noticed—thereby seeming to suggest, though unwittingly, that a model school which should aim merely to demonstrate certain methods of teaching might just as well make use of rows of dummies or wax works, as of live children.

The students taking this course have been given various suggestions and clues, most of them growing out of their own unaided observations, such as to note what things and what activities seemed to appeal most strongly to the interest of the children, what were the signs of attention and of inattention, and what fluctuations in attention could be detected. They have also been made more or less aware of a principle of unity, or what may be termed the psychological unit.

This principle or unit may be described in various ways. In simplest terms the unit is the *conscious act*. In more technical terms it is the sensori-motor circuit. After the analogy of the reflex-arc concept, it has been more customary to speak of the sensori-motor *arc*. If it be an arc, it is just as much a motor-sensory as a sensori-motor arc. The term "circuit" names the mutual and complementary relations of the two arcs. In less technical language, our acts, those which psychology studies,

flow from and depend upon certain states of consciousness—this corresponds to the sensori-motor arc. At the same time, our states of consciousness report and depend upon our acts—this corresponds to the motor-sensory arc. No separation exists between the two sides. For example, the very act of writing these words, which was dependent in a measure, upon a certain state of consciousness, a mental image at least, if not an idea, becomes in its very expression a stimulus to further states of consciousness. The unit of this whole round of conscious activity, or of any round of conscious activity, is the sensori-motor circuit. It is also described as the co-ordinating or adjusting of stimulus and response. Various degrees and qualities of consciousness characteristic of this process have been discussed in class, ranging from habit to attention.

As in the case of the units employed by the various physical sciences—the atom, molecule, and cell, for example—the sensori-motor circuit represents the lowest terms to which the reality studied can be reduced without annihilating or getting outside of the reality itself. The unit in each case, however, is not a mere reduction to lowest terms, a mere abstraction. It has been stripped of concrete details, to be sure, but it has been stripped for action, as a runner is stripped for the race. It becomes a principle of unity, a principle of guidance, of interpretation, of growth, of control.

It cannot be expected that any one of these scientific units should have much apparent meaning or value for a beginning student. The general or controlling principles of a science are not appreciated at the start, no matter how large they may be written on the first pages of the text-book and no matter how conscientiously committed to memory and glibly recited. They are more commonly the last things to be fully appreciated. I should suppose that the atom and molecule to which the student of chemistry is introduced early in his course must be very different from the atom and molecule he learns to know and use when he studies stereo-chemistry. It does not follow, however, that a student should not be introduced to a principle until he is ready to appreciate it—for one thing, that time would

never come, under that condition. The business of an introductory course in any science is to *introduce*; that is, to present the student in some courteous way, in some way that should not insult either nature or human nature, to the principles of thought and action which constitute that particular branch of learning as a science. The point is perhaps too obvious and commonplace to have mentioned, yet I wish I could make it more emphatic, in the face of so much superstitious confidence in the magic touch of the externals of science—laboratory materials and apparatus, the accumulation of facts, and the production of tangible results; and especially in the face of so much impatience with the slow growth in the mind of the concepts of science—now vague, impalpable, and elusive, shifting like clouds and perhaps obscuring the light, and only after long delays precipitating and fructifying the earth.

But my purpose was simply to write a brief introduction to some extracts from reports on observations made by members of a beginning class in psychology. The following extract may be taken as illustration of the psychological unit in one of its simplest forms:

In the first grade an experiment was being made—some plates were put on the table and the children asked not to touch them. The teacher had hardly made the request when one boy put out his hand and touched a plate. She spoke of it again. He put his hands down as if to hold them. But it was only a moment before they were up, reaching for the plate again. He seemed to have a desire to do as he was asked and, I think, intended to do so, but his will power was not strong enough to control his hand.

Several members of the class have been studying the character of the responses to stimuli made by some of the children, noting especially whether, on the one hand, responses or reactions are made in a pretty immediate, direct, intense, or disconnected way, with little or no “stopping to think,” or, on the other hand, whether the responses are slow, delayed, thoughtful, self-conscious, or switched off possibly into unseen channels of association or of emotion. These expressions are not intended to be synonymous, but merely suggestive of a few of the various possibilities. A child whose responses are prevaillingly of the former character might be called a “motor” child; one of the

latter character might be called a "sensory" child, following the very convenient but somewhat misleading nomenclature suggested by Professor Baldwin in his *Story of the Mind*.

I will select first a number of extracts from reports of various students which were made with reference to a child, who seems to be a pretty clear case of the "motor" type.

A child in the first grade has interested me very much. He is active, impulsive, and quick to respond to every stimulus. Everything he does seems to be done without the least thought of why he is doing that thing. If told to do a thing he thinks only of the act and listens to no further details, but gets up to do it. For example, one day he was put on a stone committee, which was to gather stones on the *day following*. The latter part of the directions he did not wait to hear, but taking his partner *started out at once* to gather stones, and of course had to be called back. This thoughtless activity has led to selfishness on his part, I think, in that he responds so quickly as to think of no one but himself. He is also, I think, very domineering.

(The early and definite locating of a child under some familiar ethical category is certainly not to be encouraged. The average moral "size-up" of a child is usually the most immoral thing that can be done for him. But the relating of a moral characteristic to some psychological characteristic is a very different proposition, and one from which much help might be expected.)

I have still been interested in watching a boy in the first grade who is of an impulsive temperament. I have noticed that when a subject is particularly interesting to him he wants to talk and act continually. All his senses seem to be immediately excited to activity. A very good illustration of this was brought out in a recent lesson in science, in testing different stones for their composition by pouring acid on them. Most of the children were content merely to watch the process without touching the stones unless they were told. Not so with this child. Even after being told that he might burn himself if he touched the stones, he could not resist the temptation of putting his fingers to every tested stone.

The attention of the strongly motor type of child is hard to hold, because he has a tendency to seize upon the action before all the conditions are presented. Nor does he often want to be helped if he can possibly help himself. Only after he has tried and failed does he seek conditions or assistance. A child of that kind in the first grade was attempting to write his name on the board. He had done it before, but the child next to him was writing backwards; so imitation got the better of a slightly formed habit and he too began to write backwards. He held to the correct form, but reversed the letters [mirror writing] till he reached the third letter of his name, the letter

l, noticeable for its height. Then habit reasserted itself and he made the letter correctly. Consequently the downward stroke of the *l* cut into the letter he had previously formed. He at once stopped; looked at it, and tried again, with the same result. After a verbal suggestion that he was writing backwards failed to help him, someone began to write his name correctly on the board before him; but he would not wait to see it finished. He tried again — still backwards. He saw that it was wrong and looked up for help. Watching the whole word written seemed to impress the direction on his mind, and he wrote the word from left to right.

Imitation is very strong in the motor type of child. He wants to "show" how the thing of which he is talking looks or is done. He is likely to accompany the word or action of another with action. Wednesday morning the first grade was listening to a story. One child kept breaking in upon the story with suggestions, but at last his attention was fixed. The teacher was describing a valley, level in the middle, with mountains on each side. As she showed with her hand the level and steep parts, the child with his head far forward, imitated every motion, even continuing the motion after she had ceased.

The extracts just cited serve to illustrate the extreme suggestibility and impulsiveness of the motor child. These qualities usually make for openness and frankness of character. His difficulties usually lie pretty close to the surface. As Professor Baldwin points out in the work already referred to (chap. viii, p. 174), the motor child is continually "'giving himself away,' so to speak, by constantly acting out his impressions, and so revealing his progress and errors."

The "sensory" child, on the other hand, presents a far more difficult problem. Observation, unaided by experiment, is often baffled by his actions or lack of actions. It is puzzling to try to make out what is going on behind the scenes. "Where the child of movement speaks out his impulsive interpretations," to quote again from Professor Baldwin, "this one sinks into himself and gives no answer."

I am sure the caution of the following report is to be commended:

The child I have been observing in the kindergarten is slow in responding to stimuli. He is a child who, I believe, is maturing very slowly. He has what I would call a dull, dreamy expression, but I have not been able to tell whether this is his natural expression or whether his mind, instead of being interested in the story or game at hand, is wandering. The teacher

had told the children the same story several times, so as to have them become familiar with it. One morning she told them they might help tell the story. They all seemed very eager to tell it, except this one child. He sat very quietly while the story was being told. Now whether his mind was concentrated on the story at hand or whether it was wandering, I could not tell.

The "sensory" child is likely to be far less open to suggestion than the "motor" child, far less imitative, as the following incident with reference to the same child will illustrate:

One child in the kindergarten has been of special interest to me since the commencement of the observation work. I have worked with him at various things and he showed no interest whatsoever. [The fact that a student should take special interest in a child, because he showed no interest whatsoever, is rather significant, perhaps, of the kind of response observation work may call forth.] When told to do anything he would do it slowly, and carelessly, and aimlessly. All the little ones were deeply interested in making envelopes, for example, with the exception of this one child. He would fold the paper wrong, and if he happened to fold it right, it would be far from accurate. I would explain again and again how the seed would fall from such poorly made envelopes. He would listen and then make the next one as poorly as before.

There has been a great variety of observations on interest and attention, but it is impossible to arrange extracts from them in any systematic way. Taken in themselves they are pretty fragmentary and scattered, ranging all the way from the shifting play of interest and attention in the kindergarten to a case of highly specialized interest in one of the upper grades; but nearly every one would serve as a suggestion, a point of departure, for further observation and study.

The kindergarten children were asked to sit down in their chairs and pay attention to the drawing of a picture by one of the teachers. They are not often called upon to sit still and do nothing but attend, and it was interesting to note and compare the different ones. Most of them soon tired of watching the development of the picture and began playing with those nearest to them. Two little girls paid attention in a way — they were not interested in the real development of the picture, but watched it closely to make some remark to each other about every new part. All were greatly interested in the picture when it was completed, but paid very little attention to it until then. They had a motive or an end in view for attending to the development of this picture, but they were too young for such a vague motive to hold them to attention.

It will be noticed that this excellent bit of observation tends to fall into the "psychologist's fallacy" at the close. The children may have been *supposed* to have a motive for attending, but that they really *had* a motive, or that their tender age could keep an actual motive from operating, is exceedingly doubtful. A motive that can simply be entertained, that does not affect conduct, that does not stimulate some response or attitude, is a contradiction in terms. A motive that is not motor is a psychical vacuum, which human nature abhors. This is not aimed at the report just quoted, which may have really meant something very different; but aimed—well, into the air, if you like.

There have been some reports on what appear to be the keenest interests of the children of the first two grades. I will make selections from two reports bearing upon the interest in constructive work, which, on the whole, seems thus far to be the keenest of all. The question has been raised as to whether the social interest, sometimes called the altruistic interest, the interest in the social use to which the thing constructed is to be put, is not the dominating interest. The evidence bearing on this question has come out mostly in oral discussions, which I am unable to quote, but it tends to show that such is not the case. The interest in construction *per se* is livelier and more persistent. It can usually be turned and enlarged, if desired, to include the social interest. The whole matter, it need hardly be said, is one that will repay further investigation.

Those things which the children can do and feel that they are of some value will be the things that interest them most. For example, the second-grade children have been interested in materials and fabrics, because they were choosing some material that would make the best holders to use in the domestic-science room. These holders were for the rest of the school, so *we see* they were to be of some use and were to be for somebody's comfort. *Therefore* the children were interested.

The *italics* are mine. Here we have another beautiful case of the "psychologist's fallacy." I do not know of a better example of the tendency so prevalent among us teachers to read our own sophisticated moral motives into and back of the acts of little children. I am not overlooking, I hope, the value and

suggestiveness of the report just quoted in raising the question regarding the relative intensity of interests.

Here is an extract from another report bearing on the same point; *italics* mine:

All the children of the second grade are very much interested in weaving holders; so much so that yesterday morning before school they began to work on them without being told. They know the need of holders and would probably not care to make them if they knew no use to which they might be put. *Still it is not their use alone, I believe, which stimulates the children to make them. For the most part the interest is in the activity itself.* Children want to be doing something, using their senses, all the time.

It is noticeable that most of the observations bear upon the character of the motor responses, children being far more accessible to observation on this side than on the side of sense experience. It is possible, however, in some cases to get at the sensory side, as the following extract from the report, just quoted in part above, will illustrate. The incident may also be taken to illustrate the inhibitory effect of a slightly unpleasant sense experience.

Each child chose the colors with which to make his own holder. One boy chose two that went well together, yellow and blue, but gave the yellow to another child, who needed it, and took green to finish his with. When he had woven the two colors together for a time, he stopped working and said he thought it was not pretty; some other color would go with the blue better than green. His interest had subsided, and a teacher had to persuade him to go on again. This child seems to be more sensitive to harmony of colors than most children.

The following brief extract suggests a good lead for further observation, especially on the sensory side:

As a whole, the children in the kindergarten are very quick to respond to stimuli of the coarser nature, while those of the finer, such as delicate touch, call forth little response. . . . They do not mind if their envelopes are folded unevenly or cut in the wrong place. In fact, they would not notice it if their attention were not called to it by the teacher. . . . Their observation out of doors is very keen as compared with that of an older person.

In the following report there is an interesting and significant attempt, it seems to me, to connect the sensory and motor sides; that is, to make the "circuit":

This morning I was practicing writing on the blackboard in the first grade

room, before school. One of the children, noting the continuous line of *m*'s I was making, took up a piece of chalk and also began to make a line of them. His line, instead of being straight, first went up, then down. He did not notice the crookedness of his line, however, until a straight line was drawn just below the *m*'s I had written. Then he began again, this time keeping the lower strokes of the *m*'s quite uniform, but the upper ones still uneven. After noticing this, he watched carefully both the top and bottom of the letters, and succeeded in getting the letters quite uniform in size, but in a very crooked line. It was evident that writing in a continuous straight line involved more new sensations than he was able to attend to at one time. Neither uniformity of size, continuous movement of the arm, nor measuring distance visually, were as yet fixed pathways in his brain. Hence, when his attention was focused on the one action, the others suffered accordingly, since his muscular apparatus was unable to adjust itself to fit so many new, incoming sensations.

It is worth while comparing this report with the selection first quoted in this paper. In that selection the "will" was appealed to as affording a sort of explanation. In this report note that the "muscular apparatus was unable *to adjust itself* to fit so many new, incoming sensations." It is likely, of course, that there might be considerable difference of opinion as to explanations in either case. After all, the important thing to note is that *some* kind of psychological analysis and interpretation was brought to bear upon what might otherwise have been passed by as an incident too trivial to mention.

The point of this paper is intended to be pedagogical rather than psychological. I have tried to show by means of a few illustrations how, in the course of an introduction to psychological principles, the minds of prospective teachers may be turned to an objective, analytical, and, in some degree, scientific observation of children. There are those, no doubt, who would question the desirability of endeavoring to develop this attitude of mind in prospective teachers, fearing lest it should dull and harden that sympathetic and personal touch which is the essential qualification of the artist teacher. The contention is an important one, and one that cannot be fully discussed within the limits of this paper.

It should be freely granted that one who did not share in the well-nigh universal impulse of interest and sympathy toward

children would do well to select some other calling than that of teaching. But at the same time, I should maintain that there is a direct relation, a balance, between the range and play of objective, intellectual, scientific interest in children, on the one hand, and depth and genuineness of sympathy, on the other; and, further, that the sole guarantee of the latter is the former. The sign that these two have been developed is what we call the *sense of humor*, which is the life-preserver, if not the life, of the teacher. Without a sense of humor a teacher is either a drudge or a despot. Humor kindles and glows only when fed by objective relationships and incongruities perceived by a discriminating intelligence. It may be analyzed, perhaps, by one who manifests it not; but it *lives* by an objective, intellectual habit. It has been said of a certain portion of the human family, by one of their own number, that they take themselves too seriously and the world not seriously enough. No matter how unjust and uncalled-for such a remark may be, we should all admit, probably, that it does not describe a state of humor or of sympathy. It was said of a certain teacher that, whenever the pupils did wrong, she felt bad, instead of *looking into it*. The application is obvious. I recall hearing a distinguished physician, who had been praising a young and brilliant surgeon, say finally: "But yet, after all, he is too cold, too unsympathetic. *He doesn't know enough!*"

All this proves nothing, some one may say. Perhaps not, but it may help to define a point worth further investigation.

WILLARD C. GORE.

THE UNIVERSITY OF CHICAGO,
School of Education.